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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,104	02/04/2004	Scott Lewallen	2126-14-3	5058

7590 08/22/2007
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EXAMINER

BUMGARNER, MELBA N

ART UNIT	PAPER NUMBER
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3732

MAIL DATE	DELIVERY MODE
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08/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,104

Applicant(s)

LEWALLEN ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 40-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/29/05, 8/31/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Invention I claims 1-39 in the reply filed on May 25, 2007 is acknowledged. The traversal is on the ground(s) that the examiner can search and examine the claims in each of these groups without serious burden. This is not found persuasive because the combination of the hand piece claims do not require the particulars of the subcombination of the apparatus and the method claims do not require the apparatus, and the apparatus has separate utility of a device for storage of data and display. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 40-46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Objections

3. Claims 28, 30, and 36 are objected to because of the following informalities: claims 28 and 30 have improper preamble, claim 36 does not further limit the claimed limitations.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is incomplete for omitting essential elements, such omission amounting to a gap between the elements, for example the claim preamble reads "[a]n apparatus to

determine the proximity of a dental instrument in a tooth's root canal to the canal's apical foramen while using the dental instrument"; however, the positively claimed elements are only a signal generator and microprocessor. It is unclear whether the dental instrument is intended to be positively claimed as it is limited in claims 2, 9, 10, and 23. The claimed invention is an apparatus, it is unclear as to the apparatus of the apparatus in claim 3. In claim 8, the language is not clear as to what is meant by and the purpose of "a reference impedance coupled between the first node and a second node" in that it is not functional in the microprocessor or other element, such as in generating the proximity signal. Also, similar language used in claims 27, 29 and 37 in reference to reference impedance. Recitation of "the patient" in claims 8, 27, 29, and 37, "the proximity indication" in claims 2 and 9, "the divider" in claims 4 and 5, "the digital display" in claims 20 and 21, "the stimulation signal frequency" in claims 31 and 38, and "the stimulation voltage" in claim 34 lack sufficient antecedent basis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

7. Claims 1-3, and 5 are rejected as understood, under 35 U.S.C. 102(b) as being anticipated by Salesky (4,526,179). Salesky discloses an apparatus to indicate the proximity of the end (tip) of a dental instrument to the root canal's apical foramen (column 2 line 67) comprising a signal generator (oscillator device) and a microprocessor (determinator device, arithmetic unit), the signal generator and microprocessor are capable of performing the intended use described.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky. Salesky discloses an apparatus that shows the limitations as described above; however, Salesky does not show lookup table. It would have been an obvious matter of choice to one having ordinary skill in the art to use a lookup table in lieu of an arithmetic equation as values on a table would be defined by the equation. It would have been obvious to one having ordinary skill in the art to have a digital converter for analog signals input to the microprocessor.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Melba Bumgarner".

Melba Bumgarner
Primary Examiner